

2004 Water Quality Assessment (Final) - Category 5 Listings for WRIA 13

WRIA	Listing ID	Category	98 List?	Waterbody Name Basis	Location Information					Parameter	Remarks	Medium
13	5851	5	Y	AYER (ELWANGER) CREEK Six excursions beyond the criterion collected by Thurston County (submitted by Sue Davis on 3/28/96) between 1992 and 1995.	XR83PB	2.997	17N	01E	07	Dissolved oxygen		Water
13	5849	5	Y	AYER (ELWANGER) CREEK Sixteen excursions beyond the criterion collected by Thurston County (submitted by Sue Davis on 3/28/96) between 1992 and 1995 off Sienna Court.	XR83PB	2.997	17N	01E	07	Fecal Coliform	Fecal coliform data were previously submitted only in hardcopy form. The water segment is listed as Category 5 based on the 1998 assessment.	Water
13	5850	5	Y	AYER (ELWANGER) CREEK Four excursions beyond the criterion out of 9 samples collected by Thurston County (submitted by Sue Davis on 3/28/96) between 1992 and 1995.	XR83PB	2.997	17N	01E	07	pH	Low pH	Water
13	42337	5	N	BLACK RIVER DITCH Thurston County data (submitted by Mark Biever on March 16, 2004), station (Black Ditch @ Jones Quarry), shows in year 2003 there were 92 occurrences in which the 7-day mean of daily maximum value exceeded the temperature criterion for this waterbody; the maximum exceedance in this year was 24.19 °Celcius for the 7-day period ending July 31, 2003.	GW14BM	46.06	18N	02W	29	Temperature		Water
13	8688	5	Y	BUDD INLET (INNER) Norton, 1986. , excursions beyond the criterion in edible shellfish tissue.	390KRD	47122A8F9	47.055	122.895		BENZO(A)ANTHRACENE		Tissue
13	8685	5	Y	BUDD INLET (INNER) Norton, 1986. , excursions beyond the criterion in edible shellfish tissue.	390KRD	47122A8F9	47.055	122.895		Benzo(b)fluorene		Tissue
13	8686	5	Y	BUDD INLET (INNER) Norton, 1986. , excursions beyond the criterion in edible shellfish tissue.	390KRD	47122A8F9	47.055	122.895		Benzo(k)fluorene		Tissue
13	8689	5	Y	BUDD INLET (INNER) Norton, 1986. , excursions beyond the criterion in edible shellfish tissue.	390KRD	47122A8F9	47.055	122.895		Chrysene		Tissue

WRIA	Listing ID	Category	98 List?	Waterbody Name	Location Information				Parameter	Medium	Remarks
				Basis							
4/2005)	13	5852	5	N	BUDD INLET (INNER)	390KRD	47122A9F0	47.055	122.905	Dissolved oxygen	Water
	Data collected by Ecology (summarized by Eisner and Newton, 1997) show 22 excursions beyond the 1992 and 1994.					criterion out of 48 samples (46%) at station BI-4 between				This listing was reviewed by Ecology Marine Unit staff for natural conditions, with the conclusion that anthropogenic sources appear to contribute to the D.O. exceedances. This listing should be left on Category 5 (Grantham memo,	
	Newton et al. (1998) Dept. of Ecology Ambient Monitoring Station BUD002 (Budd Inlet - S. End Oly Port) shows 5 excursions beyond the criteria out of 37 samples collected between 1993-2000										
4/2005)	13	5853	5	Y	BUDD INLET (INNER)	390KRD	47122A9E0	47.045	122.905	Dissolved oxygen	Water
	Data collected by Ecology (summarized by Eisner and Newton, 1997) show 25 excursions beyond the 1992 and 1994.;					criterion out of 49 samples (51%) at station BI-5 and 23 excursions beyond the criterion out of 44 samples (52%) at station BI-6 between 1992 and 1994.;				This listing was reviewed by Ecology Marine Unit staff for natural conditions, with the conclusion that anthropogenic sources appear to contribute to the D.O. exceedances. This listing should be left on Category 5 (Grantham memo,	
4/2005)	13	5862	5	Y	BUDD INLET (INNER)	390KRD	47122A9G0	47.065	122.905	Dissolved oxygen	Water
	Data collected by Ecology (summarized by Eisner and Newton, 1997) show 10 excursions beyond the 1992 and 1994.					criterion out of 47 samples (21%) at station BI-3 between				This listing was reviewed by Ecology Marine Unit staff for natural conditions, with the conclusion that anthropogenic sources appear to contribute to the D.O. exceedances. This listing should be left on Category 5 (Grantham memo,	
4/2005)	13	5863	5	Y	BUDD INLET (INNER)	390KRD	47122A8F9	47.055	122.895	Dissolved oxygen	Water
	Data collected by Ecology (summarized by Eisner and Newton, 1997) show 7 excursions beyond the 1992 and 1994.					criterion out of 26 samples (27%) at station BI-1 between				This listing was reviewed by Ecology Marine Unit staff for natural conditions, with the conclusion that anthropogenic sources appear to contribute to the D.O. exceedances. This listing should be left on Category 5 (Grantham memo,	
4/2005)	13	5864	5	Y	BUDD INLET (INNER)	390KRD	47122A8G9	47.065	122.895	Dissolved oxygen	Water
	Data collected by Ecology (summarized by Eisner and Newton, 1997) show 15 excursions beyond the 1992 and 1994.					criterion out of 48 samples (31%) at station BI-2 between				This listing was reviewed by Ecology Marine Unit staff for natural conditions, with the conclusion that anthropogenic sources appear to contribute to the D.O. exceedances. This listing should be left on Category 5 (Grantham memo,	
4/2005)	13	7587	5	N	BUDD INLET (INNER)	390KRD	47122A9H1	47.075	122.915	Dissolved oxygen	Water
	Data collected by Ecology (summarized by Eisner and Newton, 1997) show 20 excursions beyond the 1992 and 1994.					criterion out of 47 samples (43%) at station BA-2 between				This listing was reviewed by Ecology Marine Unit staff for natural conditions, with the conclusion that anthropogenic sources appear to contribute to the D.O. exceedances. This listing should be left on Category 5 (Grantham memo,	

WRIA	Listing ID	Category	98 List?	Waterbody Name Basis	Location Information				Parameter	Medium	Remarks	
4/2005)	13	40581	5	Y	BUDD INLET (INNER)	390KRD	47122A9F0	47.055	122.905	Dissolved oxygen	Water	This listing was reviewed by Ecology Marine Unit staff for natural conditions, with the conclusion that anthropogenic sources appear to contribute to the D.O. exceedances. This listing should be left on Category 5 (Grantham memo,
					Newton et al. (1998) Dept. of Ecology Ambient Monitoring Station BUD002 (Budd Inlet - S. End Oly Port) shows 5 excursions beyond the criterions out of 37 samples collected between 1993-2000							
	13	8690	5	Y	BUDD INLET (INNER)	390KRD	47122A8E9	47.045	122.895	Total PCBs	Tissue	
					Johnson and Davis, 1996. , excursion beyond the National Toxics Rule criterion (PCB-1254) calculated for tissue in mussel samples collected in 1995 from the head of East Bay at the culvert at the mouth of Moxlie Creek.							
	13	3769	5	N	BUDD INLET (OUTER)	390KRD	47122B9E2	47.145	122.925	Dissolved oxygen	Water	This listing was reviewed by Ecology Marine Unit staff for natural conditions, with the conclusion that anthropogenic sources appear to contribute to the D.O. exceedances. This listing should be left on Category 5 (Grantham memo,
				Data collected by Ecology (summarized by Eisner and Newton, 1997) show 2 excursions beyond the criterion out of 10 samples (20%) at station BF-3 between 1992 and 1994.								
4/2005)	13	3770	5	N	BUDD INLET (OUTER)	390KRD	47122B9E1	47.145	122.915	Dissolved oxygen	Water	This listing was reviewed by Ecology Marine Unit staff for natural conditions, with the conclusion that anthropogenic sources appear to contribute to the D.O. exceedances. This listing should be left on Category 5 (Grantham memo,
					Data collected by Ecology (summarized by Eisner and Newton, 1997) show 3 excursions beyond the criterion out of 13 samples (23%) at station BF-2 between 1992 and 1994.							
	13	7582	5	Y	BUDD INLET (OUTER)	390KRD	47122A9I0	47.085	122.905	Dissolved oxygen	Water	This listing was reviewed by Ecology Marine Unit staff for natural conditions, with the conclusion that anthropogenic sources appear to contribute to the D.O. exceedances. This listing should be left on Category 5 (Grantham memo,
					Data collected by Ecology (summarized by Eisner and Newton, 1997) show 4 excursions beyond the criterion out of 24 samples (17%) at station BB-1 between 1992 and 1994.							
	13	7583	5	Y	BUDD INLET (OUTER)	390KRD	47122B9A1	47.105	122.915	Dissolved oxygen	Water	This listing was reviewed by Ecology Marine Unit staff for natural conditions, with the conclusion that anthropogenic sources appear to contribute to the D.O. exceedances. This listing should be left on Category 5 (Grantham memo,
				Data collected by Ecology (summarized by Eisner and Newton, 1997) show 12 excursions beyond the criterion out of 45 samples (27%) at station BC-3 between 1992 and 1994.								

WRIA	Listing ID	Category	98 List?	Waterbody Name	Location Information					Parameter	Remarks	Medium
				Basis								
13	16722	5	Y	DESCHUTES RIVER	TM40PW	1.076	18N	02W	60	Fecal Coliform		Water
Hallock (2004), Dept. of Ecology ambient station 13A060 meets tested standards for fecal coliform.												
Hallock (2004), Dept. of Ecology ambient station 13A060 shows 1 of 12 samples (8.3%) in year 2003 exceeded the percentile criterion.												
Hallock (2001) Dept. of Ecology Ambient Monitoring Station 13A060 (Deschutes R. at E St Bridge) shows a geometric mean of 28 does not exceed the criterion and that 11% of the samples exceeds the percentile criterion from 9 samples collected during 2001.												
Hallock (2001) Dept. of Ecology Ambient Monitoring Station 13A060 (Deschutes R. at E St Bridge) shows a geometric mean of 15 does not exceed the criterion and that 0% of the samples does not exceed the percentile criterion from 12 samples collected during 2000.												
Hallock (2001) Dept. of Ecology Ambient Monitoring Station 13A060 (Deschutes R. at E St Bridge) shows a geometric mean of 36 does not exceed the criterion and that 0% of the samples does not exceed the percentile criterion from 12 samples collected during 1999.												
Hallock (2001) Dept. of Ecology Ambient Monitoring Station 13A060 (Deschutes R. at E St Bridge) shows a geometric mean of 34 does not exceed the criterion and that 0% of the samples does not exceed the percentile criterion from 12 samples collected during 1998.												
Hallock (2001) Dept. of Ecology Ambient Monitoring Station 13A060 (Deschutes R. at E St Bridge) shows a geometric mean of 34 does not exceed the criterion and that 8% of the samples does not exceed the percentile criterion from 12 samples collected during 1997.												
Hallock (2001) Dept. of Ecology Ambient Monitoring Station 13A060 (Deschutes R. at E St Bridge) shows a geometric mean of 24 does not exceed the criterion and that 0% of the samples does not exceed the percentile criterion from 6 samples collected during 1996.												
Hallock (2001) Dept. of Ecology Ambient Monitoring Station 13A060 (Deschutes R. at E St Bridge) shows a geometric mean of 51 does not exceed the criterion and that 17% of the samples exceeds the percentile criterion from 12 samples collected during 1995.												
Hallock (2001) Dept. of Ecology Ambient Monitoring Station 13A060 (Deschutes R. at E St Bridge) shows a geometric mean of 59 does not exceed the criterion and that 0% of the samples does not exceed the percentile criterion from 2 samples collected during 1994.												
Hallock (2001) Dept. of Ecology Ambient Monitoring Station 13A060 (Deschutes R. at E St Bridge) shows a geometric mean of 25 does not exceed the criterion and that 22% of the samples exceeds the percentile criterion from 9 samples collected during 1993.												
13	6232	5	Y	DESCHUTES RIVER	TM40PW	43.781	16N	02E	30	Fine Sediment		Water
The following references document habitat alterations: Schuett-Hames and Flores, 1993, fine sediment rated as 'poor' according to the TFW watershed analysis manual threshold on reach 22 (RM 28.5) Squaxin Island Tribal data (submitted by Jeff Dickison on 2/27/96) show fine sediment ranging from 15.5% to 22.5% The following references document characteristic uses: Squaxin Island Tribal data (submitted by Jeff Dickison on 2/27/96) show stock of Coho salmon Baranski, 1996 SASSI Update shows that Coho are reclassified to depressed. The following references document human-caused contribution to habitat alterations Toth, 1991 Thurston County, 1995												

WRIA	Listing ID	Category	98 List?	Waterbody Name Basis	Location Information					Parameter	Medium	Remarks
13	6576	5	Y	DESCHUTES RIVER	TM40PW	1.076	18N	02W	60	Temperature	Water	
	Dept. of Ecology unpublished data from core ambient monitoring station 13A060 (Deschutes R. at E St Bridge) shows a 7-day mean of daily maximum values of 19.4 for mid-week 10 August 2001.											
	Hallock (2001) Dept. of Ecology Ambient Monitoring Station 13A060 (DESCHUTES RIVER AT E ST BRIDGE) shows 1 excursions beyond the criterion out of 50 samples collected between 1993 - 2001											
	7588	5	Y	DESCHUTES RIVER	TM40PW	58.221	15N	03E	07	Temperature	Water	
	Sullivan et al. 6 excursions beyond the criterion collected in 8/88 at site AF.										Continuous temperature measurements were taken, but data were previously submitted only in hardcopy form. The water segment is listed as Category 5 based on the 1998 assessment.	
	7590	5	Y	DESCHUTES RIVER	TM40PW	22.466	17N	01W	33	Temperature	Water	
	Squaxin Island Tribal data (submitted by Jeff Dickison on 2/27/96) show 38 excursions beyond the criterion at RM 15.0 during 1995.										Continuous temperature measurements were taken, but data were previously submitted only in hardcopy form. The water segment is listed as Category 5 based on the 1998 assessment.	
13	7591	5	Y	DESCHUTES RIVER	ST93WM	0	16N	01E	18	Temperature	Water	
	Squaxin Island Tribal data (submitted by Jeff Dickison on 2/27/96) show 27 excursions beyond the criterion at RM 20.8 during 1995.											
	7592	5	Y	DESCHUTES RIVER	TM40PW	43.781	16N	02E	30	Temperature	Water	
	Squaxin Island Tribal data (submitted by Jeff Dickison on 2/27/96) show 32 excursions beyond the criterion at RM 28.5, during 1995.										Continuous temperature measurements were taken, but data were previously submitted only in hardcopy form. The water segment is listed as Category 5 based on the 1998 assessment.	
	7593	5	Y	DESCHUTES RIVER	TM40PW	49.861	16N	02E	34	Temperature	Water	
	Squaxin Island Tribal data (submitted by Jeff Dickison on 2/27/96) show 54 excursions beyond the criterion at RM 33.0 during 1995.										Continuous temperature measurements were taken, but data were previously submitted only in hardcopy form. The water segment is listed as Category 5 based on the 1998 assessment.	
13	40612	5	Y	DOBBS CREEK	UNK000	0	00U	000U	00	Fecal Coliform	Water	
	15 excursions beyond the criterion collected by Thurston County (submitted by Sue Davis on 3/28/96) between 1992 and 1995.										There is no WASWIS ID for this segment. The stream	
	drains										to the east shore of Henderson Inlet. TRS 19N-01W-28.	

WRIA	Listing ID	Category	98 List?	Waterbody Name	Location Information				Parameter	Medium	Remarks
				Basis							
13	40613	5	Y	DOBBS CREEK	UNK000	0	00U	000U	00	pH	Water
				Three excursions beyond the criterion collected by Thurston County (submitted by Sue Davis on 3/28/96) on 2/26/93, 3/16/93 and 12/20/94.							There is no WASWIS ID for this segment. The stream to the east shore of Henderson Inlet. TRS 19N-01W-28.
13	39755	5	Y	HENDERSON INLET	390KRD	47122B8B2	47.115	122.825	Fecal Coliform	Water	
				Department of Health unpublished data collected from station HENDERSON INLET-185 show a geometric mean of 32 cfu/100mL and 43.33333333333333% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001. Department of Health unpublished data collected from station HENDERSON INLET-187 show a geometric mean of 17 cfu/100mL and 26.66666666666667% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001. Department of Health unpublished data collected from station HENDERSON INLET-188 show a geometric mean of 18 cfu/100mL and 26.66666666666667% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001. Department of Health unpublished data collected from station HENDERSON INLET-189 show a geometric mean of 16 cfu/100mL and 30% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001. Department of Health unpublished data collected from station HENDERSON INLET-195 show a geometric mean of 11 cfu/100mL and 23.33333333333333% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001.							
13	39756	5	Y	HENDERSON INLET	390KRD	47122B8A2	47.105	122.825	Fecal Coliform	Water	
				Department of Health unpublished data collected from station HENDERSON INLET-186 show a geometric mean of 19 cfu/100mL and 26.66666666666667% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001.							
13	39763	5	N	HENDERSON INLET	390KRD	47122B8D3	47.135	122.835	Fecal Coliform	Water	
				Department of Health unpublished data collected from station HENDERSON INLET-192 show a geometric mean of 6 cfu/100mL and 6.66666666666667% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001.							Although the water quality standards are met, the samples exceed the Department of Health's criterion for a Threatened shellfish growing area.
				Department of Health unpublished data collected from station HENDERSON INLET-194 show a geometric mean of 8 cfu/100mL and 10% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001.							
				Department of Health unpublished data collected from station HENDERSON INLET-196 show a geometric mean of 5 cfu/100mL and 0% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001.							
				Department of Health unpublished data collected from station HENDERSON INLET-202 show a geometric mean of 10 cfu/100mL and 6.66666666666667% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001.							
				Department of Health unpublished data collected from station HENDERSON INLET-204 show a geometric mean of 4 cfu/100mL and 0% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001.							

WRIA	Listing ID	Category	98 List?	Waterbody Name Basis	Location Information				Parameter	Remarks	Medium
13	39766	5	N	HENDERSON INLET	390KRD	47122B8B3	47.115	122.835	Fecal Coliform		Water
Department of Health unpublished data collected from station HENDERSON INLET-197 show a geometric mean of 10 cfu/100mL and 13.33333333333333% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001. Department of Health unpublished data collected from station HENDERSON INLET-200 show a geometric mean of 8 cfu/100mL and 10% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001.											
13	39767	5	N	HENDERSON INLET	390KRD	47122B8C3	47.125	122.835	Fecal Coliform		Water
Department of Health unpublished data collected from station HENDERSON INLET-191 show a geometric mean of 8 cfu/100mL and 10% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001. Department of Health unpublished data collected from station HENDERSON INLET-198 show a geometric mean of 8 cfu/100mL and 13.33333333333333% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001. Department of Health unpublished data collected from station HENDERSON INLET-204 show a geometric mean of 4 cfu/100mL and 0% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001.											
13	39770	5	N	HENDERSON INLET	390KRD	47122B8C2	47.125	122.825	Fecal Coliform		Water
Department of Health unpublished data collected from station HENDERSON INLET-201 show a geometric mean of 12 cfu/100mL and 16.66666666666667% of samples exceed the percentile criterion with the last sample collected on 4-Dec-2001.											
13	3757	5	Y	HUCKLEBERRY CREEK	RX35HU	1.575	15N	04E	17	Temperature	Water
Caldwell, et al. 1991, Numerous excursions beyond the criterions at 4 different locations during 1990.										The daily maximum excursions are for one year only and do not meet the WQ Program Policy 1-11 (updated 9/02) for showing persistent temperature impairment. Listing will be placed in waters of concern category until further study and monitoring indicates the status of the water.	
13	3758	5	Y	INDIAN CREEK	KX91JE	2.632	18N	01W	18	Fecal Coliform	Water
Thirteen excursions beyond the criterion collected by Thurston County (submitted by Sue Davis on 3/28/96) between 1993 and 1995 at Quince Ave.										Fecal coliform data were previously submitted only in hardcopy form. The water segment is listed as Category 5 based on the 1998 assessment.	
13	3759	5	Y	INDIAN CREEK	KX91JE	0	18N	02W	41	Fecal Coliform	Water
Data collected by Brown and Caldwell (submitted by Matthew Davis on 9/17/97) show numerous excursions beyond the percentile criterion collected between 11/96 and 8/97 at the mouth: 3 of 4 samples (75%) collected in 1996 exceeded the percentile criterion and 12 of 13 of samples (92.3%) exceeded the percentile criterion in 1997.											

WRIA	Listing ID	Category	98 List?	Waterbody Name Basis	Location Information				Parameter	Medium	Remarks	
13	6348	5	N	LAWRENCE LAKE	355SBF	16N	02E	29	Total Phosphorus	Water	Completed Phase I State Clean Lakes Restoration Project in 1992 - Problems Encountered: Blue-green algae, hypolimnetic anoxia, aquatic macrophytes, low transparency, sediment phosphorus recycling. KCM, 1991.	Phase II State Clean Lakes Restoration Project: Control measures implemented based on the Phase I Study - development of plans and specifications for sediment removal/dredging, watershed nutrient management (septic system management), public education.
13	6352	5	N	LONG LAKE	473ADP	18N	01W	22	Total Phosphorus	Water	Completed Phase I Federal Clean Lakes Restoration Project in 1982- Problems Encountered: Blue-green algae, low transparency, aquatic macrophytes, sediment phosphorus recycling.	Completed Federal Clean Lakes Restoration
Project in											Sumioka and Dion (1985) show a summer epilimnetic total phosphorus concentration of 10 ug/L derived from the reported Carlson's Trophic State Index value which does not exceed the water quality standards nutrient criterion for the Puget Lowlands Ecoregion.	1987:Entranco Engineer's, 1987. Control measures implemented - phosphorus precipitation/inactivation, aquatic macrophyte harvesting, public education. Welch and Cooke, 1995 = monitored effectiveness of control measures showed a 14 ug/l increase in whole-lake total phosphorus 8 years
after												implementation. A phosphorus control plan is in place that has been adopted by Thurston County on 1/3/95. An active Lake Management District with funding for the phosphorus control plan under Thurston County Ordinance Number
11000												adopted 9/5/95.
												Listing ID 22723 rolled into this listing 04/06/04 -kk
13	17431	5	N	MCINTOSH LAKE	618HVI	16N	01W	33	Total PCBs	Tissue	Seiders, 2002. show the National Toxics Rule criterion was exceeded in fillet samples of Brown trout collected in 2001.	
13	12581	5	N	MCLANE CREEK	SD15AI	0.792	18N	03W	24	Fecal Coliform	Water	National Monitoring Program unpublished data (submitted by David Batts on 13 December 2002) show excursions beyond the the geometric mean criterion in the wet season from 1998-1999. National Monitoring Program unpublished data (submitted by David Batts on 13 December 2002) show excursions beyond the the percentile criterion in the wet seasons from 2001-2002. National Monitoring Program unpublished data (submitted by David Batts on 13 December 2002) show excursions beyond the the geometric mean criterion in the dry season from 1999-2001. National Monitoring Program unpublished data (submitted by David Batts on 13 December 2002) show excursions beyond the the percentile criterion in the dry seasons from 1999-2001.
13	41707	5	N	MCLANE CREEK	SD15AI	0	18N	02W	19	Fecal Coliform	Water	Batts, D. and K. Seiders, (2003), station MCL-SAMPLE shows that 15 of 42 samples (35.7%) collected in 2001 exceed the percentile criterion and that 12 of 41 samples (29.3%) collected in 2000 exceed the percentile criterion; Batts, D. and K. Seiders, (2003), station MCL-SAMPLE shows the geometric mean of 109.5 exceeds the criterion and 8 of 41 samples (19.5%) collected in 1999 exceed the percentile criterion.

WRIA	Listing ID	Category	98 List?	Waterbody Name Basis	Location Information					Parameter	Remarks	Medium
13	3761	5	Y	MOXLIE CREEK Data collected by Thurston County (submitted by Sue Davis on 10/30/97) show 5 excursions beyond the upper criterion at Plum Street and Henderson Blvd between 1994 and 1996.	UNK000	0	00U	000U	00	Fecal Coliform		Water Fecal coliform data were previously submitted only in hardcopy form. The water segment is listed as Category 5 based on the 1998 assessment. TRS 18N-02W-27.
13	39781	5	N	NISQUALLY REACH/DRAYTON PASSAGE Department of Health unpublished data collected from station NISQUALLY REACH-225 show a geometric mean of 8 cfu/100mL and 16.6666666666667% of samples exceed the percentile criterion with the last sample collected on 3-Dec-2001. Department of Health unpublished data collected from station NISQUALLY REACH-229 show a geometric mean of 3 cfu/100mL and 3.33333333333333% of samples exceed the percentile criterion with the last sample collected on 3-Dec-2001. Department of Health unpublished data collected from station NISQUALLY REACH-230 show a geometric mean of 7 cfu/100mL and 3.33333333333333% of samples exceed the percentile criterion with the last sample collected on 3-Dec-2001.	390KRD	47122B7A3	47.105	122.735		Fecal Coliform		Water
13	6361	5	N	PATTERSON (SOUTH ARM) LAKE Completed Phase I Federal Clean Lakes Restoration Project in 1982- Problems Encountered: Blue-green algae, low transparency, aquatic macrophytes, sediment phosphorus recycling. Sumioka and Dion (1985) show a summer epilimnetic total phosphorus concentration of 30 ug/L from samples collected in 1981 which exceeds the water quality standards nutrient criterion for the Puget Lowlands Ecoregion.	460TBQ	18N	01W	35		Total Phosphorus	Completed Federal Clean Lakes Restoration Project in1987: Entranco Engineer's, 1987. Control Measures Implemented Phosphorus precipitation/inactivation, aquatic macrophyte harvesting, public education. Monitoring is being conducted under Ecology's Lake Water Quality Assessment Program and Thurston County. Welch and Cooke (1995) monitored the effectiveness of the control and showed only a 1 ug/L increase in whole-lake phosphorus 7 years after implementation.	Water
13	3763	5	Y	REICHEL CREEK Seven excursions beyond the criterion collected by Thurston County (submitted by Sue Davis on 3/28/96) between 1992 and 1995.	PN14TO	0	16N	01E	27	Fecal Coliform	Fecal coliform data were previously submitted only in hardcopy form. The water segment is listed as Category 5 based on the 1998 assessment.	Water
13	40616	5	Y	SLEEPY (LIBBEY) CREEK Five excursions beyond the criterion collected by Thurston County (submitted by Sue Davis on 3/28/96) between 1992 and 1995.	UNK000	0	00U	000U	00	Dissolved oxygen	There is no WASWIS ID for this segment. The stream to the west shore of Henderson Inlet into Chapman Cove. TRS 19N 02W-18.	Water
13	40614	5	Y	SLEEPY (LIBBEY) CREEK Eleven excursions beyond the criterion collected by Thurston County (submitted by Sue Davis on 3/28/96) between 1992 and 1995.	UNK000	0	00U	000U	00	Fecal Coliform	There is no WASWIS ID for this segment. The stream to the west shore of Henderson Inlet into Chapman Cove. TRS 19N-02W-18.	Water

WRIA	Listing ID	Category	98 List?	Waterbody Name Basis	Location Information					Parameter	Medium	Remarks		
drains	13	40615	5	Y	SLEEPY (LIBBEY) CREEK	UNK000	0	00U	000U	00	pH	Water	There is no WASWIS ID for this segment. The stream	
					Six excursions beyond the criterion collected by Thurston County (submitted by Sue Davis on 3/28/96) between 1992 and 1995.								to the west shore of Henderson Inlet into Chapman Cove. TRS 19N-02W-18.	
	13	35941	5	N	SQUAXIN, PEALE, AND PICKERING PASSAGES	390KRD	47122B9F0	47.155	122.905		Total PCBs	Tissue		
					Washington Department of Fish and Wildlife PSAMP database show the National Toxic Rule Criterion was exceeded in a composite of more than 5 muscle tissue tissue tissue tissue tissue samples collected in 1992-1993 from English sole (Pleuronectes vetulus) samples from station BDDINLET.									
	13	41709	5	N	SWIFT CREEK	GL11FO	0.058	18N	03W	24		Fecal Coliform	Water	
					Batts, D. and K. Seiders, (2003), station SCR shows the geometric mean of 122.0 exceeds the criterion and 2 of 8 samples (25%) collected in 2000 exceed the percentile criterion.									
	13	7022	5	Y	WARD LAKE	729WNB	18N	02W	38		Total PCBs	Tissue		
					Serdar, 1999. exceeded National Toxics Rule criterion in largemouth bass, rainbow trout, cuttthroust trout, and kokane collected in 1999. Serdar, et al. 1994. excursions beyond the criterion in edible fish tissue.									
	13	3772	5	Y	WOODARD CREEK	MJ83ZH	0	19N	01W	19		Fecal Coliform	Water	Thurston County Environmental health data (submitted by Sue Davis on 2/29/96) also showed 8 excursions beyond criteria during 1993 and 1994. Therefore the category is changed from 1 to 5
				Thurston County Environmental Health data (submitted by Sue Davis on 2/29/96) show geometric mean criteria are met in from 1993 to 1995.										
	13	3772	5	Y	WOODARD CREEK	MJ83ZH	0	19N	01W	19		Fecal Coliform	Water	Thurston County Environmental health data (submitted by Sue Davis on 2/29/96) also showed 8 excursions beyond criteria during 1993 and 1994. Therefore the category is changed from 1 to 5
				Thurston County Environmental Health data (submitted by Sue Davis on 2/29/96) show geometric mean criteria are met in from 1993 to 1995.										
	13	3774	5	Y	WOODLAND CREEK	JH31LN	6.044	18N	01W	16		Dissolved oxygen	Water	
				Patterson and Dickes, 1994. 11 excursions beyond the upper criterion out of 30 samples (37%) at RM 4.2 between 1991 and 1993.;										
	13	6657	5	Y	WOODLAND CREEK	JH31LN	6.044	18N	01W	16		Fecal Coliform	Water	Data is only available in hardcopy format. The water segment is listed as Category 5 based on the 1998 assessment.
				Patterson and Dickes, 1993. 3 excursions beyond the upper criterion at RM 4.2 between 1991 and 1993. Patterson and Dickes, 1993. 5 excursions beyond the upper criterion at RM 3.8 between 1991 and 1993. Patterson and Dickes, 1993. 3 excursions beyond the upper criterion at RM 3.7 between 1991 and 1993. Patterson and Dickes, 1992. 2 excursions beyond the upper criterion at RM 4.2 during 1991 and 1992. Patterson and Dickes, 1992. 3 excursions beyond the upper criterion at RM 3.8 during 1991 and 1992.										

WRIA	Listing ID	Category	98 List?	Waterbody Name Basis	Location Information					Parameter	Remarks	Medium
13	36180	5	N	WOODLAND CREEK Department of Ecology unpublished data from the Woodland Creek TMDL Study station WC01 show a 7-day mean of maximum value of 22.24 degrees C from continuous measurements collected in 2002.	JH31LN	0.034	19N	01W	33	Temperature		Water
13	36184	5	N	WOODLAND CREEK Department of Ecology unpublished data from the Woodland Creek TMDL Study station WC10 show a 7-day mean of maximum value of 22.06 degrees C from continuous measurements collected in 2002.	JH31LN	7.493	18N	01W	15	Temperature		Water
13	36185	5	N	WOODLAND CREEK Department of Ecology unpublished data from the Woodland Creek TMDL Study station WC11 show a 7-day mean of maximum value of 22.79 degrees C from continuous measurements collected in 2002.	JH31LN	7.893	18N	01W	22	Temperature		Water